C. Remarks

Claims 1-5, 7-16 and 18-26, with claims 1 and 12 being independent. Claims 6 and 17 have been canceled without prejudice or disclaimer. Claims 1, 9, 12 and 20 have been amended to clarify the invention. Applicant submits that the amendments made herein are fully supported throughout the application as filed; accordingly, no new matter has been added. Reconsideration of the present claims is respectfully requested.

The Examiner objected to claim 6 and 17 since the Examiner alleges that the time-divisional drive control circuit is not described or shown to be located between extensions of adjacent ink supply channels. While Applicant respectfully traverses this objection, Applicant has nonetheless canceled claims 6 and 17 without prejudice in an effort to expedite prosecution of this application. Accordingly, the objection is moot and should be removed.

The Examiner objected to claims 9 and 20 since the Examiner alleges that the phrase "provided on both one side and its opposite side of the printhead substrate" is unclear as to the structure arrangement. In response, Applicant has replaced the phrase "provided on both one side and its opposite side of the printhead substrate" with --provided on both sides in a longitudinal direction of the printhead substrate-- in each claim. Accordingly, Applicant submits that the structure arrangement is clear and that the objection should be removed.

Claims 1-26 stand rejected under 35 U.S.C. §102 (e) as being anticipated by Fujii (U.S. Patent No. 6,729,708). Applicant respectfully traverses this rejection.

The present invention is directed to a printhead substrate (independent claim 1), as well as to a printhead (independent claim 12). The key features of both the printhead substrate and the printhead are the same. More specifically, each has at least two printing element arrays, each having a plurality of printing elements disposed in an area between at least two of a plurality of ink supply channels. In addition, both the printhead substrate and the printhead possess a drive control circuit, disposed outside the area, for controlling the driving of the at least two printing element arrays and a shared wiring portion, disposed in the area, for providing a shared signal making each of the printing elements of the at least two printing element arrays provided corresponding to two adjacent ink supply channels of the plurality of ink supply channels drivable. According to the amended claimed invention, plural printing element arrays, which are supposed to be driven by supplying, e.g., different inks, are driven by a shared signal through a shared wiring portion disposed on an area between two adjacent ink supply channels. By virtue of these amended features, a printhead substrate (or ultimately a printhead) of reduced size can be achieved since it is possible to reduce the number of signal wirings as compared to a case where a separate drive control circuit is provided corresponding to each of a plurality of ink supply channels.

On the other hand, Fujii merely discloses a configuration in which element arrays are provided on both sides of a single ink supply opening (see Figs. 6 and 11 of Fujii). A plurality of ink supply channels simply are not provided on Fujii's printhead. The Examiner alleges that Fujii discloses multiple ink supply channels (at col. 12, line 20). However, contrary to the Examiner's position, the liquid channels disclosed therein merely indicate electrothermal transducers. These correspond to ink flow paths, as shown in Fig. 3

(reference numerals 301C, 301M and 301Y) of the present application. An electrothermal transducer (heater) is provided in each ink flow path. According to the disclosure of the present application, ink supply channels as claimed are as indicated by reference numerals 2C, 2M and 2Y in Fig. 6 of the present application. Thus, the Examiner's application of Fujii to the presently claimed features is mistaken. Furthermore, since Fujii does not disclose a plurality of ink supply channels, Fujii could not possibly disclose or suggest a shared wiring portion disposed in an area between at least two of a plurality of ink supply channels.

Furthermore, Fujii does not disclose or suggest a shared wiring portion disposed in an area between two adjacent ink supply channels of a plurality of ink supply channels for providing a shared (common) signal, making each of the printing elements of the at least two printing element arrays provided corresponding to two adjacent ink supply channels of the plurality of ink supply channels drivable. This is a key feature of the amended claims defining the present invention; this key feature is neither taught nor suggested by Fujii.

In sum, Fujii fails to disclose or suggest at least several key features of the present invention, namely a plurality of ink supply channels and the provision of a shared wiring portion for providing a shared signal making each of the printing elements of the at least two printing element arrays provided corresponding to two adjacent ink supply channels of the plurality of ink supply channels drivable. As a result, the benefits of the presently claimed printhead substrate and printhead, i.e., reduced size, would not be achieved through the teachings of Fujii. Accordingly, Applicant submits that the present

invention is not anticipated (or rendered obvious) in view of Fujii and respectfully requests that the §102 rejection be withdrawn.

This Amendment After Final Rejection is believed clearly to place this application in condition for allowance. At the very least, it reduces the number of pending claims. Its entry is therefore believed proper under 37 C.F.R. §1.116. Accordingly, entry of this Amendment After Final Rejection, as an earnest attempt to advance prosecution, is respectfully requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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